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**SUSTAINABLE SUPPLY CHAIN MANAGEMENT MODEL FOR TOURISM:
 A CASE STUDY OF PHU TUB BERG TOURIST DESTINATION, PHETCHABOON,
 THAILAND**

Wangchuk Rabten¹, Pema Wangdra, Phutawan Ho, Thagoon Siriyod, Warakorn Khondee, Wipawee Buasuwan, Chai Ching Tan²

¹ *Corresponding author: School of Management, Mae Fah Luang University, Chiangrai, Thailand*

² *Advisor: School of Management, Mae Fah Luang University, Chiangrai, Thailand*

Corresponding author's email: wangchukrabten.bt@gmail.com

The main objective of this study was to propose the comprehensive sustainable supply chain model for tourism, tourism business mapping and tourism model canvas which can help practitioners in decision making and implementation of policy to sustain tourism industry. Many tourist destinations had extinct due to excessive tourism and general neglect from government, sectors and communities. The lack of sustainable supply chain resulted in disorganization in tourism industry. Therefore, supply chain players need to maintain strong relationship to sustain its resources in generation. The proposed models were created with throughout analysis of past research papers and case studies from Bhutan. Model was implemented to Phu Tub Burg, a popular tourist destination in Phetchaboon province in Thailand. The lack of policy was the reason for the excessive tourist in that place. The model helped to sustain supply chain management in tourism to create and maintain green business in tourism. To sustain tourism, it showed that there needs a strong policy from government with support from local community members.

Keywords: Sustainable tourism, Business model, Balanced scorecard.

1.INTRODUCTION

Supply chain management plays a vital role in today's business sectors. To run a business, it is impossible without the support from other sectors. Supply chain starts from suppliers to customers; supply of good and services. To sustain the tourism industry for generation, there should be sustainable supply chain management. Supply chain in tourism provides the effective way amongst the industry. According to World Tourism Organization (2018), the tourism industry increases rapidly with the increase number of tourists traveling to different destination. The arrivals of international tourists increased continuously for eight years with no interruption and the destination countries have been accommodating around 1,323 million international tourists which was around 84 million greater than in 2016. The increase in number every year is a big challenge for tourism industry to handle their long-term goal. By 2030, 1.8 billion travelers are expected to cross international borders (WTO & GTERC, 2016). Most research on tourism was focused on the general aspects of tourism environment lacking the need of sustainable supply chain model.



Contingency approach of sustainable supply chain management was published in global journal of management and business research, (volume 115 issues 2015) but it lacks the sustainable area in triple bottom line. In early 1975, the United Nation World Tourism Organization has published a report on the distribution channel in tourism (UNWTO, 1975). The distribution channel is the supply chain but it was focus on marketing. It was another failure to sustain the tourism industry. And the need of this sustainable supply chain model in tourism industry is the result of the following problems: There is no strong policy on triple bottom line; Tourism policies that talk on economic, social and environmental issues have to develop the awareness of its potential both for positive and negative dynamics (Making tourism more sustainable: A guide for policy makers, UNEP). If there is strong policy on triple bottom line, in regard to supply chain, it will benefit in long –term. The bond of relationship amongst players is limited; sustainability in tourism includes not only sustaining the environment or some sectors but the relevant players. Filling these gaps is concerning with sustainability. No proper strategy structure; Proper research, surveys, feedback, statistics, data collection and processing and research related to tourism sustainability strategy structure are needed for making sound policy decisions. There are numbers of cases where the tourist destination has vanished and unhappy tourist impact economic growth. The aim of this research is, by means of case learning from Bhutan in their efforts of sustainability development, a research is made to suggest a comprehensive sustainable supply chain model for the tourism development for Phu Tub Berg.

2.LITERATURE REVIEW

To accomplish the research objective, this study employs two important but interrelated concepts, namely business model and balanced scorecard. As stated in Aung and Tan (2016), business model is a logic of operations structure which defines how an enterprise create and deliver value to customers and in return capture the value, by use of creative and learning compounding strategies. Organizational learning is a missing factor in the normative business model canvas approach contributed to Osterwalder (2004); but a careful review of the nature of resources, being tangible and intangible or transformed, transforming in nature, reveals that organizational learning is a resource (Tan, 2018) which should be actively considered. To make explicit the role of organizational learning, Tan (2018) recommends the use of Balanced Scorecard (BSC) concept to complement the role of business model canvas. BSC has since the introduction by Kaplan and Norton (1992), transformed into a management tool or performance management system that advocates on a balanced or holistic philosophy for sustainability premise (Tan, 2018). To be exact, by appropriately allocate strategic resources and partnerships, similar to the concept of the business model canvas, Tankam and Tan (2018), and Jongwanapitakkul and Tan (2018) empirically tested their abilities to improve activities, customer perceptions of the products and services, and thus achieving sustainable competitiveness. In other



words, BSC concept should be adapted for assisting the conceptualization of business model which is this study relies upon.

Sustainability is a dominant issue nowadays. Most of the business today need to adjust themselves to be able to sustain in the competing environment and to follow the global trend of sustainable development between the business benefits, society, and environment. The term “Triple Bottom Line” was created in 1994 by John Elkington. Not only the economic value generated that is concentrated on by Triple Bottom Line but also the environmental and social value generated or ruined (Elkington, 2004). Organizations need to concern about three bottom lines, which consist of three parts. First, financial term that involve with profit and loss. Second, people term as it reflects how outsider thought to the organization. People perspective is also involving the local stakeholder who either influence or are affected by tourist activities. The third is planet term, referring to how friendly organization to the environment (Hindle, 2008). Once the three dimensions are concerned and optimized between gain and loss, it might be implying that the business will be able to sustain.

3. METHOD

To accomplish the research objective, that is, by means of case learning from Bhutan in their efforts of sustainability development, a research is made to suggest a comprehensive sustainable supply chain model for the tourism development for Phu Tub Berg. The research method is an early phase of a further mixed research, by carefully reviewing the sustainability achievements of Bhutan, so as to utilize the experiences of Bhutan to analyze Phu Tub Berg and suggest a business and BSC models for sustainability realizations.

In the following sequence the case of Bhutan would be delineated which provides a rich information from which the researchers synthesize the success structures. The themes identified would be employed to guide the researchers to proceed to analyze Phu Tub Berg for suggesting the business model and BSC model.

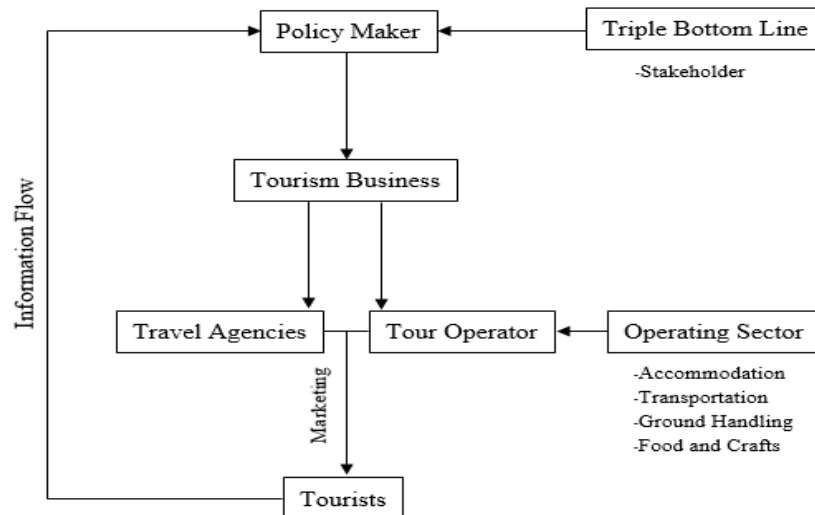
4. DISCUSSION

4.1. Case of Bhutan

In this study, the mentioned model is very similar to Bhutan because Bhutan has been using sustainable model to promote their tourism industry and maintain its rich environment, culture and tradition at the same time. According to National Environment Commission (1998), Bhutan government used the sustainability model to their country as the concept of “high value-low volume” by limiting, collecting high fee per day which was almost \$70 per a visitor and controlling a number of tourists before traveling in Bhutan for increasing its value of exclusive and outstanding tourism experience. In addition, Bhutan tried to inform their tourists to concern on Bhutan’s environmental conservation and induce tourists’ cultural and traditional preservation. Moreover, Bhutan government has been establishing their target tourist segment as niche market with high value, and in case of destroying any



natural environment, tourists have to be punished by being fined (Dorji, 2001). Therefore, policy maker is the key player in sustainable tourism supply chain as shown in Figure 1.



As such Bhutan government's rules, regulation and policies, they adopted "Triple Bottom Line" as their sustainable model for long term development by taking social, environmental and economical perspectives of Bhutan into account (Dorji, 2001). Bhutan tried to make their strong partnership between government, international organization, tourism industry, NGO, private sector and local community as their main collaborations, and the government also exchanges and shares some benefits to each other especially local community. For example, the government tried to manage tourism in their own area by themselves such as the local community's tourism management in Laya and Soe within the Jigme Dorji National Park, and the government gave local people education in tourist attractions and its history for increasing their tourism industry's value and giving employment opportunities to local people to strengthening their long-term sustainability (Dorji, 2001). Additionally, the government tried to exchange any information, disadvantages and benefits between their main collaborators because they all are the main stakeholders in Bhutan tourism industry before officially approving any policies, regulations or rules for sustainable policies in the future. However, the government is still the main factor or influencer for managing whole tourism industry. Furthermore, the government also concerned on environmental issue as an important topic. Bhutan government tried to make policies which limit and reduce all kinds of activities making pollutions, noise, air and water, during travelling, and in the future Bhutan government would try to establish policies that promote alternative energy (Dorji, 2001).

In tourism industry supply chain, there are many important business players, but in this study the researcher will focus on two main players which are "Travel agencies" and "Tour operator" being closer sectors to customers. However, according to the study of Ujma, as cited in Zhang et al., (2009), tour operator is not only a dealer, but also some of them are provider of tourism activities, transportation, tourist package or accommodation. According to Goeldner and Ritchie (2007), tour operator, moreover, is a professional organization managing, planning, and operating the journey trip that is paid and planned in advanced by using travel agents as one of its channels to publish or release it to the market.



Therefore, in the model, the researchers add “Operating sector” consisting of accommodation, transportation, ground handling and food and crafts as an influencer to “tour operator”. Moreover, both travel agencies and tour operator have to follow any regulations, rules and policies that the policy maker establishes including TBL concerning on various stakeholder’s benefits. Furthermore, travel agencies and tour operator are the provider of both product and service in tourism industry following its organizational policies and policies maker’s policies including marketing strategy. For the model in this study, it focuses on marketing strategy in terms of evaluation of marketing behavior’s characteristics and understanding of marketing information. As a result, travel agencies and tour operator’s marketing strategy will also focus on emerging appropriate service and product according to more niche market and high value in biodiversity, culture, traditional and local prosperity following policy maker.

All tourists in Bhutan have to follow all government, travel agencies and tour operators’ policies concerning on TBL. A number of tourists in Bhutan have to be limited, and the segment of tourists specified by the government has to have value conscious of environmental and local or social awareness (Dorji, 2001). Moreover, the tourists have to be charged for tourist package fee about \$200 per person per night in January, February, June, July, August and December, and \$ 250 per person per night in March, April, May, September, October and November; in addition, the fee includes internal taxes and charges together with sustainable development fee for \$65 consisting of free education, healthcare, infrastructure and poverty alleviation (Tourism Council of Bhutan, 2017). Furthermore, the tourists will also be informed and acknowledged both government and private sectors in Bhutan about the importance of national environment, culture and tradition to be effectively sustainable conservation and preservation for Bhutan. As a result, the tourists can discover and experience beautiful environmental, local, cultural and traditional tourism and heritage.

4.2 Case study of Phu Tub Berg

Phu Tub Berg is one of the most attractive tourist destinations in Phetchaboon, Thailand. Because of the good weather, scenery, and nature, there were a lot of tourists travelling to Phu Tub Berg during the high season and keep increasing every year. In addition, in recent year, the Ministry of Tourism and Sport (2017) in Thailand reports that, in January 2017, the occupancy rate in Petchaboon had increased by 4.72% which could be interpreted that the number of tourists travelling to Phu Tub Berg had also increased. It is the common economic mechanism that the increasing number of the tourists will generates more demands for the accommodations, foods and beverages, ground handling, and also transportations. Before, Phu Tub Berg is full of wonderful natures, cultivated farm and also unique cultures. Since the tourism development, it has been changed to the buildings, a lot of resorts, and the way people live has been changed. Despite the fact that local people could earn more money and develop their lives through the spending of tourists, the environment and the ecosystem may have been altered or destroyed which may jeopardize the potential uses by the future generations (Tan, 2018). According to Deng et al. (2015), the plantation area is affected more significantly by the urbanization that is expanding uninterruptedly when the major driving cause remains in the economic growth. Figure



2 and Figure 3 are proposed as the strategy mapping and business canvas model to help and implement the sustainable tourism business in Phu Tub Berg. Thai policy makers can also issue the policies to encourage the preservation of the environment and the development of social by communicating with the stakeholders; economic, environment, and social, in Phu Tub Berg and designing what the policy should be.

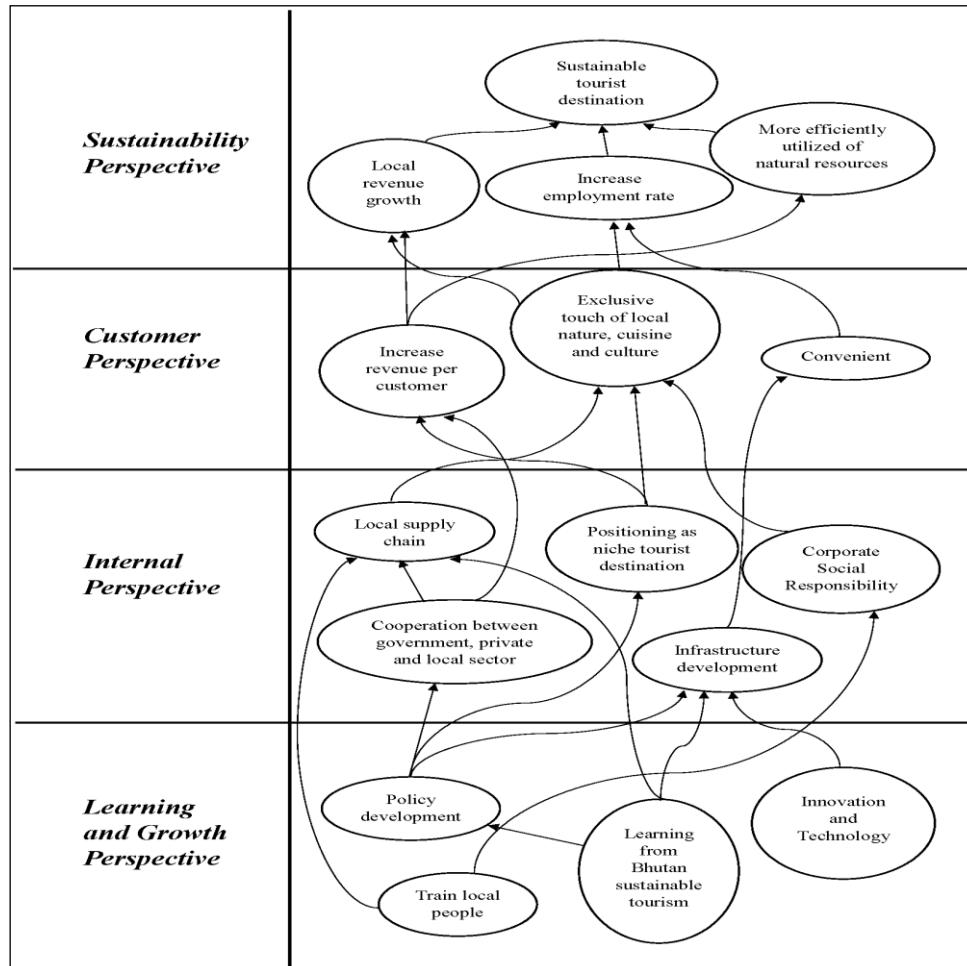









Figure 2: Strategy mapping in BSC model



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<div>Key Partners</div> <div><ul style="list-style-type: none">• Tour operator and agency• Non-government organization• Local accommodation and restaurant• Insurance company</div>	<div>Key Activities</div> <div><ul style="list-style-type: none">• Marketing• Cooperation amongst sectors• Conference• Local support• Arrange and set regulation</div>	<div>Value Propositions</div> <div><p>Exclusive touch of Phu Thub berg in;</p><ul style="list-style-type: none">• Local cuisine• Local culture• Local nature<p>Safe trip</p><ul style="list-style-type: none">• Insurance</div>	<div>Customer Relationships</div> <div><ul style="list-style-type: none">• Membership discount• Personal communication</div>	<div>Customer Segments</div> <div><p>Tourist with interest in local cuisine, culture and nature, and support</p><p>-Domestic</p><ul style="list-style-type: none">• University students (18-25)• Adulthood (working age)• Retired people<p>-Foreigner</p><ul style="list-style-type: none">• European• North American• Asian</div>
<div>Cost Structure</div> <div><ul style="list-style-type: none">• Salaries, wages, utilities and building• Marketing and advertising• Subsidiaries to local infrastructure and environment• Membership discount cost• Renovation and development cost in environment</div>	<div>Revenue Streams</div> <div><ul style="list-style-type: none">• Taxes collected from hotel and restaurant• Public services provided• Conference fees• Taxes collected from tourists• Revenue from advertising space in website</div>			



5. CONCLUSION

The aim of this research is, by means of case learning from Bhutan in their efforts of sustainability development, a research is made to suggest a comprehensive sustainable supply chain model for the tourism development for Phu Tub Berg. The BSC model identifies the role of learning and growth, being implemented for instance by policy development, active use of innovation and technology, local community training and benchmarking, to influence a chain of tourism development and tourism-related supply chain processes. Only when a robust systems-approach to tourism development (Tan, 2018) is made possible, such as by the shown BSC model, the business model of tourism development of a destination can be soundly established for sustainability purpose. There is a limitation of this research. Noticed that this research is an early state of a further mixed research method, and thus the business model suggested has not so far incorporated the views of the local stakeholders or other relevant ones, including the government policy makers and execution offices. This research can only serve as an early portion of a rigorous research. A research that is policy-impactful should be systematic and systems oriented in order to ensure interlinked holism and comprehension.

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